

ABSTRACT

Described are anatomic braces, traction devices, and scaffolds containing superelastic supports capable of reinforcing anatomic joints or other structures, applying a directional force in response to a deflection, and/or producing a spring force to apply decompression or compression to the anatomy. The braces are intended to reinforce the back, knees, ankles, elbows, wrists, shoulders, neck, hips, or other anatomy commonly associated with a degree of twisting, rotation, bending, or other desired motion. The anatomic braces and traction devices also provide motion assistance and/or intensify the force during motion of anatomic structures. In particular, the anatomic braces and traction devices aid in standing, bending, throwing, kicking, jumping, running, walking, hitting, shooting, or other strenuous activity by inducing a directional force upon deflection. The braces alternatively apply a specific resistance at the anatomic joint to strengthen the muscles during training or rehabilitation. The braces also immobilize or stabilize joints, bones, or other anatomic structures during healing of an injury.

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